

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/804,331A  
Source: 1FWO  
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## RAW SEQUENCE LISTING

DATE: 04/02/2007

PATENT APPLICATION: US/10/804,331A

TIME: 16:00:49

Input Set : A:\9368-5 SUBSTITUTE.ST25.TXT

Output Set: N:\CRF4\04022007\J804331A.raw

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3 <110> APPLICANT: Smith, Johnathan F.
4     Kamrud, Kurt I.
5     Rayner, Jon O.
7 <120> TITLE OF INVENTION: IMPROVED ALPHAVIRUS REPLICONS AND HELPER CONSTRUCTS
9 <130> FILE REFERENCE: 9368-5
11 <140> CURRENT APPLICATION NUMBER: US 10/804,331A
12 <141> CURRENT FILING DATE: 2004-03-19
14 <150> PRIOR APPLICATION NUMBER: US 60/456,196
15 <151> PRIOR FILING DATE: 2003-03-20
17 <160> NUMBER OF SEQ ID NOS: 44
19 <170> SOFTWARE: PatentIn version 3.3
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 18
23 <212> TYPE: PRT
24 <213> ORGANISM: Artificial
26 <220> FEATURE:
27 <223> OTHER INFORMATION: Alphavirus attenuating amino acid insertion sequence
29 <400> SEQUENCE: 1
31 Ile Thr Ser Met Asp Ser Trp Ser Ser Gly Pro Ser Ser Leu Glu Ile
32 1             5             10             15
35 Val Asp
39 <210> SEQ ID NO: 2
40 <211> LENGTH: 357
41 <212> TYPE: DNA
42 <213> ORGANISM: Artificial
44 <220> FEATURE:
45 <223> OTHER INFORMATION: Spacer sequence generated by AluI digest of pCDNA
47 <400> SEQUENCE: 2
48 ctgaatgaag ccatacctaaa cgacgagcgt gacaccacga tgcctgtagc aatggcaaca      60
50 acgttgcgca aactattaac tggcgaacta cttactctag ctaccaactc tttttccgaa      120
52 ggtaactggc ttcagcagag cgcagatacc aaatactggt cttctagtgt agccgtagtt      180
54 aggccaccac ttcaagaact ctgtagcacc gcctacatac ctcgctctgc taatcctggt      240
56 accagtggct gctgccagtg gcgataagtc gtgtcttacc gggttggact caagacgata      300
58 gttaccgat aaggcgcagc ggtcgggctg aacgggggggt tcgtgcacac agcccag      357
61 <210> SEQ ID NO: 3
62 <211> LENGTH: 342
63 <212> TYPE: DNA
64 <213> ORGANISM: Artificial
66 <220> FEATURE:
67 <223> OTHER INFORMATION: Spacer sequence generated by AluI digest of pCDNA
69 <400> SEQUENCE: 3
70 ctattccaga agtagtgagg aggctttttt ggaggcctag gcttttgcaa aaagcttgta      60
72 tatccatttt cggatctgat caagagacag gatgaggatc gtttcgcatg attgaacaag      120

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74 atggattgca cgcaggttct cgggccgctt ggggtggagag gctattcggc tatgactggg      180
76 cacaacagac aatcggctgc tctgatgccg ccgtgttccg gctgtcagcg caggggccc      240
78 cggttctttt tgtcaagacc gacctgtccg gtgccctgaa tgaactgcag gacgaggcag      300
80 cgcggctatc gtggctggcc acgacgggag ttccttgccg ag                               342
83 <210> SEQ ID NO: 4
84 <211> LENGTH: 257
85 <212> TYPE: DNA
86 <213> ORGANISM: Artificial
88 <220> FEATURE:
89 <223> OTHER INFORMATION: Spacer sequence generated by AluI digest of pCDNA
91 <400> SEQUENCE: 4
92 ctcatttttt aaccaatagg ccgaaatcgg caaaatccct tataaatcaa aagaatagac      60
94 cgagataggg ttgagtgttg ttccagtttg gaacaagagt ccaactattaa agaacgtgga      120
96 ctccaacgtc aaagggcgaa aaaccgtcta tcagggcgat ggcccactac gtgaaccatc      180
98 accctaatac agtttttttg ggtcgaggtg ccgtaaagca ctaaatcgga accctaaagg      240
100 gagccccga tttagag                               257
103 <210> SEQ ID NO: 5
104 <211> LENGTH: 383
105 <212> TYPE: DNA
106 <213> ORGANISM: Artificial
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Spacer sequence generated by AluI digest of pCDNA
111 <400> SEQUENCE: 5
112 ctgcaagagg aacgcccgtc gtggccagcc acgatagccg cgctgcctcg tcttgcagtt      60
114 cattcagggc accggacagg tcggtcttga caaaaagaac cgggcgcccc tgcgctgaca      120
116 gccggaacac ggccggcatca gagcagccga ttgtctgttg tgcccagtca tagccgaata      180
118 gcctctccac ccaagcggcc ggagaacctg cgtgcaatcc atcttgttca atcatgcgaa      240
120 acgatectca tcttgtctct tgatcagatc cgaaaatgga tatacaagct cactcattag      300
122 gcaccccagg ctttacactt tatgcttccg gctcgtatgt tgtgtggaat tgtgagcgga      360
124 taacaatttc acacaggaaa cag                               383
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128 <211> LENGTH: 579
129 <212> TYPE: DNA
130 <213> ORGANISM: Artificial
132 <220> FEATURE:
133 <223> OTHER INFORMATION: Spacer sequence generated by AluI digest of pCDNA
135 <400> SEQUENCE: 6
136 ctgcaataaa caagtggggg tgggcgaaga actccagcat gagatccccg cgctggagga      60
138 tcatccagcc ggcgtcccgg aaaacgattc cgaagcccaa cctttcatag aaggcggcgg      120
140 tggaatcgaa atctcgtgat ggcaggttgg gcgtcgcttg gtcggtcatt tcgaacccca      180
142 gagtcccgtc cagaagaact cgtcaagaag gcgatagaag gcgatgcgct gcgaatcggg      240
144 agcggcgata ccgtaaagca cgaggaagcg gtcagcccat tcgcccga gcttgatat      300
146 ccattttcgg atctgatcaa gagacaggat gaggatcggt tcgcatgatt gaacaagatg      360
148 gattgcacgc aggttctccg gccgcttggg tggagaggct attcggctat gactgggcac      420
150 aacagacaat cggctgctct gatgccgccg tgttccggct gtcagcgcag gggcgcccgg      480
152 ttctttttgt caagaccgac ctgtccggtg ccttgaatga actgcaggac gaggcagcgc      540
154 ggctatcgtg gctggccacg acgggcgttc cttgcgcag                               579
157 <210> SEQ ID NO: 7
158 <211> LENGTH: 749

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159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial
162 <220> FEATURE:
163 <223> OTHER INFORMATION: Spacer sequence generated by AluI digest of pCDNA
165 <400> SEQUENCE: 7
166 ctgcaataaa caagttgggg tgggcgaaga actccagcat gagatccccg cgctggagga      60
168 tcatccagcc ggcgtcccgg aaaacgattc cgaagcccaa cctttcatag aaggcggcgg      120
170 tggaatcgaa atctcgtgat ggcagggttg gcgtcgcttg gtcggtcatt tcgaacccca      180
172 gagtcccgcg cagaagaact cgtcaagaag gcgatagaag gcgatgcgct gcgaatcggg      240
174 agcggcgata ccgtaaagca cgaggaagcg gtcagcccat tcgccgcca gctcttcagc      300
176 aatatcacgg gtagccaacg ctatgtcctg atagcgggtc gccacacca gccggccaca      360
178 gtcgatgaat ccagaaaagc ggccattttc caccatgata ttcggcaagc aggcattcgcc      420
180 atgggtcacg acgagatcct cgccgtcggg catgcgcgcc ttgagcctgg cgaacagttc      480
182 ggctggcgcg agcccctgat gctcttcgct cagatcatcc tgatcgacaa gaccggcttc      540
184 catccgagta cgtgctcgct cgatgcgatg ttctcgcttg tggtcgaatg ggcaggtagc      600
186 cggatcaagc gtatgcagcc gccgcattgc atcagccatg atggatactt tctcggcagg      660
188 agcaagggtg gatgacagga gaccctgccc cggcacttcg cccaatagca gccagtcctt      720
190 tcccgtttca gtgacaacgt cgagcacag                                     749
193 <210> SEQ ID NO: 8
194 <211> LENGTH: 30
195 <212> TYPE: DNA
196 <213> ORGANISM: Artificial
198 <220> FEATURE:
199 <223> OTHER INFORMATION: PCR primer
201 <400> SEQUENCE: 8
202 tggcgcgcgg ctcggaattc cccctctccc                                     30
205 <210> SEQ ID NO: 9
206 <211> LENGTH: 29
207 <212> TYPE: DNA
208 <213> ORGANISM: Artificial
210 <220> FEATURE:
211 <223> OTHER INFORMATION: PCR primer
213 <400> SEQUENCE: 9
214 aggcgcgcct tctatgtaag cagcttgcc                                     29
217 <210> SEQ ID NO: 10
218 <211> LENGTH: 30
219 <212> TYPE: DNA
220 <213> ORGANISM: Artificial
222 <220> FEATURE:
223 <223> OTHER INFORMATION: PCR primer
225 <400> SEQUENCE: 10
226 gctggatcca tggagaaaaa aatcactgga                                     30
229 <210> SEQ ID NO: 11
230 <211> LENGTH: 31
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial
234 <220> FEATURE:
235 <223> OTHER INFORMATION: PCR primer
237 <400> SEQUENCE: 11

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Input Set : A:\9368-5 SUBSTITUTE.ST25.TXT

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238 cgatctagat tacgccccgc cctgccactc a 31
241 <210> SEQ ID NO: 12
242 <211> LENGTH: 26
243 <212> TYPE: DNA
244 <213> ORGANISM: Artificial
246 <220> FEATURE:
247 <223> OTHER INFORMATION: PCR primer
249 <400> SEQUENCE: 12
250 cggaattcat tatcatcgtg ttttttc 26
253 <210> SEQ ID NO: 13
254 <211> LENGTH: 31
255 <212> TYPE: DNA
256 <213> ORGANISM: Artificial
258 <220> FEATURE:
259 <223> OTHER INFORMATION: PCR primer
261 <400> SEQUENCE: 13
262 cgggatcccc cctaacgtta ctggccgaag c 31
265 <210> SEQ ID NO: 14
266 <211> LENGTH: 27
267 <212> TYPE: DNA
268 <213> ORGANISM: Artificial
270 <220> FEATURE:
271 <223> OTHER INFORMATION: PCR primer
273 <400> SEQUENCE: 14
274 aggcgcgcca ttatcatcgt gtttttc 27
277 <210> SEQ ID NO: 15
278 <211> LENGTH: 29
279 <212> TYPE: DNA
280 <213> ORGANISM: Artificial
282 <220> FEATURE:
283 <223> OTHER INFORMATION: PCR primer
285 <400> SEQUENCE: 15
286 aggcgcgccc taggggtctt tcccctctc 29
289 <210> SEQ ID NO: 16
290 <211> LENGTH: 42
291 <212> TYPE: DNA
292 <213> ORGANISM: Artificial
294 <220> FEATURE:
295 <223> OTHER INFORMATION: PCR primer
297 <400> SEQUENCE: 16
298 gcggcatgcc aatcgccgcg agttctatgt aagcagcttg cc 42
301 <210> SEQ ID NO: 17
302 <211> LENGTH: 26
303 <212> TYPE: DNA
304 <213> ORGANISM: Artificial
306 <220> FEATURE:
307 <223> OTHER INFORMATION: PCR primer
309 <400> SEQUENCE: 17
310 cgggatccat ggctgcgaga gcgtca 26

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Input Set : A:\9368-5 SUBSTITUTE.ST25.TXT

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313 <210> SEQ ID NO: 18
314 <211> LENGTH: 28
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial
318 <220> FEATURE:
319 <223> OTHER INFORMATION: PCR primer
321 <400> SEQUENCE: 18
322 cgggatacctt attgagacaa ggggtcgc                28
325 <210> SEQ ID NO: 19
326 <211> LENGTH: 24
327 <212> TYPE: DNA
328 <213> ORGANISM: Artificial
330 <220> FEATURE:
331 <223> OTHER INFORMATION: PCR primer
333 <400> SEQUENCE: 19
334 ccctgctcgt gccagtgttg atgc                24
337 <210> SEQ ID NO: 20
338 <211> LENGTH: 35
339 <212> TYPE: DNA
340 <213> ORGANISM: Artificial
342 <220> FEATURE:
343 <223> OTHER INFORMATION: PCR primer
345 <400> SEQUENCE: 20
346 acacgtgggg caaccctgat ttatgcctgt tgtcc        35
349 <210> SEQ ID NO: 21
350 <211> LENGTH: 30
351 <212> TYPE: DNA
352 <213> ORGANISM: Artificial
354 <220> FEATURE:
355 <223> OTHER INFORMATION: PCR primer
357 <400> SEQUENCE: 21
358 agttaactca aaaagagaaa acaaaaaatgc            30
361 <210> SEQ ID NO: 22
362 <211> LENGTH: 33
363 <212> TYPE: DNA
364 <213> ORGANISM: Artificial
366 <220> FEATURE:
367 <223> OTHER INFORMATION: PCR primer
369 <400> SEQUENCE: 22
370 agatatcttc tcttgaaaat aggacttgtc cac          33
373 <210> SEQ ID NO: 23
374 <211> LENGTH: 25
375 <212> TYPE: DNA
376 <213> ORGANISM: Artificial
378 <220> FEATURE:
379 <223> OTHER INFORMATION: PCR primer
381 <400> SEQUENCE: 23
382 gttcccggtc cagccaatgt atccg                25
385 <210> SEQ ID NO: 24

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RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 04/02/2007  
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Input Set : A:\9368-5 SUBSTITUTE.ST25.TXT  
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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,27,28  
Seq#:29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44

**VERIFICATION SUMMARY**

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